

PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

**CONSUMER PROTECTION AND SAFETY DIVISION
SAFETY AND RELIABILITY BRANCH**

**RESOLUTION SU-54
DATE: November 21, 2002**

RESOLUTION

RESOLUTION SU-54, ORDER GRANTING SANTA CLARA VALLEY TRANSPORTATION AUTHORITY A VARIANCE FROM GENERAL ORDER 95, RULE 37, TABLE 1, CASE 2-C AND RULE 74.4-E AT THE EAST ENTRANCE TO THE DIRIDON TUNNEL.

SUMMARY

1. By letter of October 25, 2001, the Santa Clara Valley Transportation Authority (VTA) petitions the Commission to authorize a variance from General Order 95 (G.O. 95), Rule 37, Table 1, Case 2-C and Rule 74.4-E at the east entrance to the Diridon Tunnel.
2. Whereas G.O. 95, Rule 74.4-E requires a clearance of 14 feet between overhead trolley conductors and rails inside a tunnel, this variance would permit VTA to lower said clearance to 13.5 feet at an area immediately inside the east entrance to the Diridon Tunnel.
3. This resolution authorizes the variance from G.O. 95 Rule 37, Table 1, Case 2-C and Rule 74.4-E at the east entrance to the Diridon Tunnel as specified above.

BACKGROUND

The Santa Clara Valley Transportation Authority (VTA) is currently finalizing the design of the Vasona Light Rail Project. This project is a 5.5-mile rail extension program with a projected service date of November, 2004. The design of the Vasona Light Rail Project includes an overhead contact system (OCS) consisting of a full catenary (messenger wire, hangers, and a trolley or contact wire) to supply traction power for the propulsion of light rail vehicles. The system will operate at a nominal voltage of 750 VDC.

It was identified during the design development stage of the OCS that a section of the extension at the east entrance of the Diridon Tunnel can not be designed in strict compliance with General Order 95 (G.O. 95) due to an unavoidably restricted vertical clearance. As currently in effect, G.O. 95, Rule 37, Table 1, Case 2-C along with Rule 74.4-E requires a minimum vertical clearance for a trolley contact conductor of 14 feet above the tracks. Likewise, Rule 74.4E, requires a minimum vertical clearance for a trolley contact conductor of 14 feet inside a tunnel.

The proposed Diridon Tunnel serves to allow VTA trains to clear the Caltrain Yard by passing under it. The west end of the tunnel opens to the proposed San Jose Diridon Station. The east end of the tunnel opens up to a grade crossing at Autumn Street. The

tunnel structure was designed with a maximum gradient for light rail vehicles of 6% at the east end. This maximum gradient allows the tunnel to reach the lowest elevation possible as the alignment extends from Autumn Street towards the Caltrain Yard. The vertical geometry required to pass from Autumn Street and clear the Caltrain tracks to the west creates a “pinch” point at the east end of the tunnel. The tunnel roof is directly under Montgomery Street, which is already being raised to provide the current clearances, but can not be raised further due to street pavement conformation limitations. The tunnel base also can not be lowered because the gradient would be too steep for light rail vehicles to negotiate.

Therefore, by letter of October 25, 2001, the Santa Clara VTA petitions the Commission to authorize a variance from G.O. 95 permitting VTA to lower the trolley wires to an elevation of 13.5 feet above the rails at an area immediately inside and outside of the east tunnel entrance.

NOTICE

Notice of the variance application was made by the Santa Clara VTA in direct written communication to the potentially affected parties. Santa Clara VTA states that a copy of the variance application letter was mailed and distributed to said parties.

PROTEST

No protest of the variance application has been filed with the Commission.

DISCUSSION

The Safety and Reliability Branch (SRB) evaluated this variance request from the vantage point of its impact on public safety. Factors influencing the SRB's evaluation included the presence of safety devices already in place (including the detection for over-current and current rate-of-rise), as well as additional safety enhancements proposed by the Santa Clara VTA in compensation for the increased risk posed by the restricted vertical clearance as follows:

- VTA will install highly visible warning signs with reflective lettering at all access areas in advance of the tunnel entrances notifying maintenance or emergency crews of the impending restrictions. This area is not accessible to public auto traffic.
- VTA will indicate on all warning signs the specific height restriction.
- VTA traction power substations will contain protective devices to interrupt the flow of electricity in the event the trolley wire is dropped to the ground.

With the installation of warning signs and other safety measures proposed by VTA, the SRB believes that the additional risk to pedestrians and VTA maintenance or emergency crews posed by granting of this variance is acceptable.

COMMENTS

This is an uncontested matter in which the decision grants the requested relief. Therefore, pursuant to Public Utilities Code § 311(g)(2), the otherwise applicable 30-day period for public review and comment is being waived.

FINDINGS

1. SRB, after reviewing the blueprints and engineering materials and visiting the site, determined that lowering the overhead contact wires to 13.5 feet above the rail tracks at an area immediately inside and outside of the east entrance to the Diridon Tunnel would not significantly impact public safety.
2. SRB recommends that this variance request be approved, contingent on safety measures proposed by VTA as described earlier.
3. Furthermore, the granting of the variance applies only to this specific request and should not be interpreted as applicable to the entire construction project.

THEREFORE, IT IS ORDERED THAT:

1. Santa Clara Valley Transportation Authority be granted a variance from General Order 95, Rule 37, Table 1, Case 2-C and 74.4-E to lower the overhead trolley conductors to 13.5 feet above the rail tracks at an area immediately inside and outside of the east entrance to the Diridon Tunnel, contingent on safety measures proposed by VTA as described earlier.
2. This resolution shall be effective immediately.

I hereby certify that this Resolution was adopted by the California Public Utilities Commission at its regular meeting on November 21, 2002. The following Commissioners approved it:

WESLEY M. FRANKLIN
Executive Director

LORETTA M. LYNCH
President

HENRY M. DUQUE

CARL W. WOOD

MICHAEL R. PEEVEY
Commissioners

Commissioner Geoffrey F. Brown, being necessarily absent, did not participate.